CLAIMS

1. (currently amended) An asymmetric Fabry-Perot modulator, comprising:

a first reflector and a second reflector in said asymmetric Fabry-Perot modulator forming a resonant cavity therebetween;

electro-absorption material disposed between said first reflector and said second reflector, the absorption of said electro-absorption material being varied in response to an external modulating signal;

a pair of electrodes disposed between the first reflector and the second reflector;

said first reflector being fixedly mounted to a substrate;

and

said second reflector being movably mounted to said substrate so as to selectively adjust said resonant cavity formed between said first reflector and said second reflector from a given length to another given length by changing the position of said second reflector relative to said first reflector, wherein the movement of said second reflector is controlled in response to a voltage applied across the pair of electrodes and wherein the magnitude of light output from said first reflector is determined by the reflectivity of said first reflector, the reflectivity of said second reflector, the absorption in said electro-absorption material and the length of said resonant cavity as defined by said second reflector being movably mounted to said substrate.

2. (Currently amended) A method for tuning an asymmetric Fabry-Perot modulator, comprising:

reflecting laser light between a first reflector and a second reflector in said asymmetric Fabry-Perot modulator, said first reflector and said second reflector forming a resonating cavity therebetween, said resonating cavity having a given length between said first reflector and said second reflector;

a pair of electrodes disposed between the first reflector and the second reflector;

adjusting said first reflector by application of a voltage across the pair of electrodes to change ~~the~~ said given length of said resonating cavity so as to produce an optimal wavelength as defined by the properties of electro-absorption material contained in said modulator; and

monitoring the output of said first reflector as said resonating cavity is tuned to ~~said~~ another given length so as to tune said asymmetric Fabry-Perot modulator to the optimal wavelength.

3. (Currently amended) A method for tuning an asymmetric Fabry-Perot modulator, comprising:

reflecting laser light between a first reflector and a second reflector in said asymmetric Fabry-Perot modulator, said first reflector and said second reflector forming a resonating cavity therebetween, and said resonating cavity being selectively adjustable from a given length to another given length between said first reflector and said second reflector, respectively;

applying an external modulating signal to electro-absorption material disposed between said first reflector and said second reflector, the absorption of said electro-absorption material being varied in response to said external modulating signal; and

adjusting said resonant cavity formed between said first reflector and said second reflector from said given length to said another given length by applying a voltage across a pair of electrodes disposed between the first reflector and the second reflector, wherein the magnitude of light output from said first reflector is determined by the reflectivity of said first reflector, the reflectivity of said second reflector, the absorption of said electro-absorption material and said another given length of said resonant cavity as defined by said another given length of the resonant cavity selectively adjustable between said first reflector and said second reflector adjustable between said first reflector and said second reflector.

4. (original) The method of claim 3 further comprising the method step of monitoring the magnitude of said light output from said first reflector.

5. (previously amended) The method of claim 4 further comprising the method step of adjusting said resonant cavity from said given length to said another given length based upon said monitored light output so as to tune said asymmetric Fabry-Perot modulator to the optimal wavelength.

6. (Currently Amended) A method for tuning a laser, comprising:

providing an asymmetric Fabry-Perot modulator, said modulator comprising:

a first reflector and a second reflector in said asymmetric Fabry-Perot modulator forming a resonant cavity therebetween;

electro-absorption material disposed between said first reflector and said second reflector, the absorption of said electro-absorption material being varied in response to an external modulating signal;

a pair of electrodes disposed between the first reflector and the second reflector;

said second reflector being movably mounted to said substrate in response to an application of a voltage across the pair of electrodes so as -to selectively adjust said resonant cavity formed between said first reflector and said second reflector from a given length to another given length by changing the position of said first reflector relative to said second reflector, wherein the magnitude of light output from said first reflector is determined by the reflectivity of said first reflector, the reflectivity of said second reflector, the absorption in said electro-absorption material and the length of said resonant cavity as defined by said another given length of the resonant cavity selectively adjustable between said first reflector and said second reflector;

applying said external modulating signal to said electro-absorption material;

monitoring said magnitude of light output from said first reflector; and

adjusting said resonant cavity from said given length to said another given length based upon said monitored light output by varying the voltage applied across the pair of electrodes so as to tune said asymmetric Fabry-Perot modulator to an optimal wavelength.

7. (Original) The method of claim 6 wherein said external modulating signal is a voltage.

8.. (Original) The method of claim 7 wherein said voltage is constant.

9. (Original) The method of claim 7 wherein said voltage is varied over a period of time.